

day after the operation, an uninterrupted recovery ensued. The patient, a man, aged sixty-four years, had not experienced any discomfort whatever from the loss of his epiglottis, deglutition and vocalization being perfect.

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**Diphtheritic Membranes in the Lung Diagnosed and Removed under Bronchoscopy.**—SKILLERN (*Laryngoscopy*, February, 1917) reports the case of a boy, aged seven years, supposed to have inspired a bead which accounted for existing cough and attacks of suffocation. Physical exploration of the chest and fluoroscopic examination were practically negative. Under bronchoscopic inspection there was detected, a little above and at the lower lobe bifurcation of the right lung, a membrane which bled on being loosened with a dull hook. It was not deemed prudent to continue manipulation at that moment. Two hours later dyspnea became so urgent as to require immediate tracheotomy. Three days later the membrane was loosened under bronchoscopy and on account of friability was found removable only piecemeal. Some pieces of membrane were coughed out through the cannula during the night. The tube was removed on the seventh day, the child being entirely well. Nine months previous to this clinical history the patient had gone through a severe attack of diphtheria followed for some two months by a cough which had cleared up entirely.

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**Gunshot Wounds of the Larynx.**—COULET (*Revue de Laryngol., d'otol. et de rhinol.*, July 15, 1917) has found but one gunshot wound of the larynx among 1200 wounded soldiers under his care. He reports a case of gunshot wound of the larynx, followed by abscess and recurrent paralysis. A bullet from a great distance had passed through the neck without injuring the great vessels, but had injured the arytenoid region and induced local inflammatory action; and it had injured the recurrent nerve in passing. A good recovery ensued, but the paralysis of the left recurrent remained permanent.

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**Chancre of the Pharyngeal Tonsil.**—HADEN (*Laryngoscope*, August, 1917) reports the case of a married woman, aged twenty-five years with headache unaccountable for by her eyes or her general condition. Though there had not been any history of trouble in nose or throat, posterior rhinoscopy, a swollen, bright red pharyngeal tonsil with apparent ulceration of its surface. Three days after an application of argyrol, though the pain became so severe as to require the administration of morphin, the patient expectorated a section of the pharyngeal tonsil which on microscopic inspection was found to contain numerous living *Spirochetæ pallida*. At this time a typical secondary rash appeared upon the body. Salvarsan was administered the next day, and the headache subsided.

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**Septic Arthritis following Submucous Resection of the Nasal Septum.**—IMPERATORI (*Laryngoscope*, March, 1917) reports a case of septic arthritis of the knee-joint following resection of the nasal septum. Fluctuation was evident on the ninth day after the operation. The joint was opened and considerable pus was found with manifestations of extensive destruction of the articular cartilages.

**Saddle-nose Deformity after Submucous Resection of the Septum Corrected by Transplantation of Bone.**—CARTER (*Laryngoscope*, February, 1917) reports a case in which eighteen months after resection of the nasal septum, he corrected a resultant saddle-back deformity by transplanting about two inches of the ninth rib, working by the intra-nasal route. The deformity was completely corrected and the nose is as strong as it ever was.

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## PATHOLOGY AND BACTERIOLOGY

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UNDER THE CHARGE OF

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**Formation of Methemoglobin by Streptococcus Viridans.**—In the classification of the streptococci, constant use is made of the formation of methemoglobin upon blood agar by the organisms of the viridans group. This alteration of the blood pigment is readily distinguished, but the manner in which the bacteria act to cause this change is not very apparent. BLAKE (*Jour. Exper. Med.*, 1916, xxiv, 315) found that the change from oxyhemoglobin into methemoglobin took place only in the presence of the living microorganisms. The reaction appeared to depend upon the metabolic activity of the bacteria and had no relation to the virulence of the particular strain. The intensity of the activity bore some relation to the rapidity of multiplication. Hence it is found that the change in the hemoglobin was most marked when the medium contained the optimum of nutritive materials. Dextrose was one of the substances which enhanced the reaction. The results obtained by the author with the *Streptococcus viridans* are very similar to those reported by Cole for the pneumococcus. In both instances the reaction appears to depend upon processes of oxidation and reduction, for the result cannot be obtained in the absence of oxygen, while it is retarded when too much oxygen is present. There is no evidence that the change in the hemoglobin is due to a specific secretion on the part of the microorganism. The author points out that the results of the experiments suggest the manner in which bacteria may be injurious to other tissues by disturbances in oxidation because of the metabolic activities of the organism. This theory, it is suggested, is particularly applicable to the *Streptococcus viridans* because the lesions produced by it are prone to be localized and associated with the actual presence of the streptococci.